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EXAMINER	
NGUYEN, NAM V	

ART UNIT	PAPER NUMBER
2635	6

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/842,749	HAIMOVITCH ET AL.	
	Examiner	Art Unit	
	Nam V Nguyen	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☒ Claim(s) *39-49* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3 and 5*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

The application of Haimovitch et al. for an "apparatus and methods for cellular communication" filed April 25, 2001 has been examined.

This application claims priority to U.S. provisional application number 60/200,646, which is filed on April 28, 2000.

Claims 1-49 are pending.

Specification

The disclosure is objected to because of the following informalities: "then" misspells of "than" in specification (see page 7 lines 6 to 14). Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman et al. (US# 6,593,845) in view of Lo (US# 5,166,929).

Referring to claim 1, Friedman et al. disclose a tag interrogation system (column 1 lines 24 to 37) comprising:

At least one base station (an RF interrogator); and

A plurality of tags (RF transponders), each having an awake mode (i.e. operating mode) and a sleep mode (i.e. low power mode) (column 1 lines 54 to column 2 line 5; see Figures 1-2);

However, Friedman et al. did not explicitly disclose wherein each base station is operative to broadcast messages which are received by the plurality of tags and has a receiving window during which it is operative to receive messages sent by individual tags from among the plurality of tags, and wherein at least some of the messages broadcast by at least some of the base stations include an indication of the time at which a future receiving window is due to open, thereby to allow tags to conserve power by remaining in said sleeping mode until said future receiving window opens.

In the same field of endeavor of multiple access radio communication system, Lo teach that wherein each base station (66) is operative to broadcast messages (10) (i.e. forward channel) which are received by the plurality of tags (72) (i.e. mobile identifier or mobile station) (column 3 lines 37 to 62; see Figures 1 and 3) and has a receiving window (i.e. reverse channel) during which it is operative to receive messages (23, 25, 27 and 29) (i.e. message bursts) sent by individual tags (mobile station A, B or C) from among the plurality of tags (mobile station A, B or C) (column 5 lines 23 to 60; ; see Figures 1-3), and

wherein at least some of the messages broadcast (i.e. message bursts) by at least some of the base stations (66) include an indication of the time (channel slot) at which a future receiving

window is due to open (i.e. a next channel slot is open for contention) (column 4 lines 54 to 64; column 5 lines 24 to 60; see Figures 3-4) in order for the base station received the response uplink signals from the mobile stations correctly.

One of ordinary skilled in the art recognizes the need to add a base station transmits a message includes a next available channel slot to mobile stations of Lo in an active RF transponder with a wake-up circuit that wakes the RF transponder from a sleep state upon detection of an RF interrogating signal of Friedman et al. because Friedman et al. suggest it is desired to provide that an interrogator to send a message with a code sequence modulated in the RF signals to wake up the RF transponder then return to the sleep mode after a predetermined period of time (column 6 line 60 to column 7 line 12; see Figures 1-4) and Lo teaches a mobile station determines to wait unit the next available time slot is open for contention to transmit the message to the base station. The base station indicates the status of the channel as being idle, when mobile stations are not sending any burst (column 4 lines 54 to column 5 line 60) in order to indicate when to transmit a response signal from mobile stations and to avoid collision. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to add a base station transmits a message includes a next available channel slot to mobile stations of Lo in an active RF transponder with a wake-up circuit that wakes the RF transponder from a sleep state upon detection of an RF interrogating signal of Friedman et al. with the motivation for doing so would have been to provide the tag to response in a particular time slotted manner to an interrogator in order to extend the battery life and also to avoid collision.

Referring to claim 7, Friedman et al. in view of Lo disclose a system according to claim 1, Lo discloses wherein each tag (72) comprises a mobile tag (column 3 lines 37 to 49; see Figures 2 and 3).

Referring to claim 8, Friedman et al. in view of Lo disclose a system according to claim 1, Lo discloses wherein communication between base units (66) and tags (72) comprises wireless communication (column 3 lines 37 to 49; see Figures 2 and 3).

Claims 2, 9, 18 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Lo (US# 5,166,929).

Referring to claim 2, MacLellan et al. disclose an enhanced uplink modulated backscatter system as recited in claim 2. See Figures 1, 5 and respective portions of the apparatus and method.

MacLellan et al. disclose a tag interrogation system (column 1 lines 25 to 47; see Figure 1) comprising:

At least one base station (101) (i.e. an interrogator) (column 3 lines 59 to 63); and

A plurality of tags (102-1 to 102-N) (column 3 lines 62 to 64),

Wherein each base station (101) has at least two receiving windows (i.e. time slots) during which the base station (101) is operative to received messages (105) (i.e. uplink signal) sent by individual tags (102-1 or 102-N) from among the plurality of tags (102-1 to 102-N),

The receiving windows (i.e. time slots) (column 4 lines 51 to column 5 lines 3; see Figures 1-3).

However, Friedman et al. did not explicitly disclose the receiving windows including:

A first, fixed assignment, receiving window comprising a plurality of time slots respectively allocated to the plurality of tags; and a second, random access, receiving window during which the base station is operative to receive communication from any of the plurality of tags.

In the same field of endeavor of multiple access radio communication system, Lo teaches the receiving windows (i.e. bursts of reverse channel) including:

A first, fixed assignment (i.e. reverse slot), receiving window comprising a plurality of time slots (25, 27 and 29) (i.e. bursts of reserve time slot) respectively allocated to the plurality of tags (72) (i.e. mobile stations) (column 5 lines 23 to 60; see Figure 2a); and a second, random access (i.e. random selected time slot for retransmission of a burst), receiving window during which the base station (66) is operative to receive communication from any of the plurality of tags (72) (column 4 line 59 to column 5 line 22; column 5 line 61 to column 6 line 10; see Figures 2b and 2d) in order to increase efficiency of channel resources.

One of ordinary skilled in the art recognizes the need to add mobile stations response the current message in consecutive reverse slots or wait a random period according to retransmission of a message of Lo in an uplink signal from tags to an interrogator at randomly chosen times of MacLellan et al. because MacLellan et al. suggest it is desired to provide a response with an uplink signal at randomly chosen times after the completion of the downlink signal (column 4 lines 51 to 67; see Figure 3) and Lo teaches a mobile station determines to wait unit the next

available time slot is open for contention to transmit the message to the base station or randomly selected delay time period to retransmit response message to the base station (column 5 line 61 to column 6 line 10) in order to indicate when to transmit a response signal from mobile stations and to avoid collision. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to add mobile stations response the current message in consecutive reverse slots or wait a random period according to retransmission of a message of Lo in an uplink signal from tags to an interrogator at randomly chosen times of MacLellan et al. with the motivation for doing so would have been to provide the tag to response in a particular time slotted manner to an interrogator in order to avoid collision and to increase efficiency of channel resources.

Referring to claim 9, MacLellan et al. disclose a tag interrogation system, to the extent as claimed with respect to claim 2 above, and the system further including:

Wherein each base station has a random access receiving window (i.e. randomly chosen times) including at least one non-allocated time slot during which the base station is operative to receive a message from an individual tag from among the plurality of tags (column 4 line 51 to 67; column 5 lines 30 to 48; column 11 line 51 to 66); and

wherein each base station (101) is operative to provide an acknowledge message following receipt of the message from the individual tag (102), wherein the acknowledge message comprises a dynamic identifier (i.e. ID) of the individual tag (102) characterizing the current communication status of the individual tag (102) (column 8 lines 15 to 57; column 9 lines 1 to 26; column 10 line 29 to 67; see Figures 6).

Referring to claim 18, MacLellan et al. in view of Lo disclose a system according to claim 2, MacLellan et al. disclose wherein each tag (102) comprises a mobile tag (column 12 line 65 to column 13 line 8; see Figure 1).

Referring to claim 28, MacLellan et al. in view of Lo disclose a system according to claim 2, MacLellan et al. disclose wherein communication between base units and tags (102-1 to 102-N) comprises wireless communication (column 1 line 20 to 23; see Figure 1).

Claims 3, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamajima et al. (US# 6,216,003) in view of Willars (US# 6,507,567).

Referring to claim 3, Hamajima et al. discloses a wireless tag communication system (column 1 lines 40 to 65; see Figures 1-4) comprising:

A first plurality of base stations (3 and 9) serving a first plurality of overlapping regions (3) (i.e. overlapping area) respectively (column 3 lines 7 to 13; see Figure 1), and

A second plurality of tags (1) (i.e. mobile stations) (column 2 lines 65 to column 3 line 6; see Figure 1);

Wherein the first plurality of base stations (3) have a cycle of operation (column 3 lines 14 to 48; see Figure 2) including:

a first plurality of generally non-overlapping broadcasting windows (15) (i.e. a radio communication channel) during which the first plurality of base stations (3), respectively, broadcast (column 2 lines 65 to column 3 lines 13; see Figure 1).

However, Hamajima et al. did not explicitly disclose a common receiving window during which substantially all of the first plurality of base stations are operative simultaneously to listen for and receive messages from the second plurality of tags.

In the same field of endeavor of wireless mobile communication system, Willars teaches that a common receiving window (64) (i.e. a common channel) during which substantially all of the first plurality of base stations (28) are operative simultaneously to listen for and receive messages from the second plurality of tags (30) (column 7 lines 66 to column 8 lines 16; column 8 line 42 to column 9 line 20; see Figures 1, 3 and 5) in order to reduce the cost associated with channel-type switching effected by the channel-type switch entity.

One of ordinary skilled in the art recognizes the need to use a common receiving channel to receive message from mobiles stations of Willars with a radio communication channel between base station and mobile station of Hamajima et al. because Hamajima et al. disclose that there are a random access channel and an individual channel switchably for controlling a handover for between plurality of base stations and mobile station (column 4 lines 10 to 31; see Figure 4) and Willars teaches using a common channel processing for the base station to switch to a dedicated channel for switching channel to establish communication between the base stations and mobile station (column 8 lines 9 to 57; see Figure 3) in order to reserve network resources in the base station. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use a common receiving channel to receive

message from mobiles stations of Willars with a radio communication channel between base station and mobile station of Hamajima et al. with the motivation for doing so would have been to increase efficiency of the base stations and reduce the cost of handover between the base stations and mobile station.

Referring to claim 26, Hamajima et al. in view of Willars disclose a system according to claim 3, Hamajima et al. disclose wherein each tag (1) comprises a mobile tag (column 1 lines 40 to 65; see Figure 1).

Referring to claim 29, Hamajima et al. in view of Willars disclose a system according to claim 3, Hamajima et al. disclose wherein communication between base units (3 and 9) and tags (1) comprises wireless communication (column 1 lines 40 to 65; see Figure 1).

Claims 4-5, 16, 27, 30-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Wizgall et al. (US# 5,630,209).

Referring to claim 4, MacLellan et al. disclose an asset monitoring system (column 3 lines 21 to 50; see Figure 1) comprising:

At least one base stations (101) (i.e. an interrogator) (column 3 lines 59 to 63); and

A plurality of asset monitoring tags (102-1 to 102-N) (column 3 lines 62 to 64);

wherein the plurality of asset monitoring tags (102-1 to 102-N) and at least one base stations (101) have defined between them at least one routine communications receiving window

(i.e. response windows) in which at least one base station (101) is operative to receive communications sent by individual asset monitoring tags (102-1 or 102-N) from among the plurality of asset monitoring tags (102-1 to 102-N) (column 4 line 50 to column 5 line 3; see Figures 1-3);

However, MacLellan et al. did not explicitly disclose that wherein the plurality of asset monitoring tags and at least one base station also have defined between them at least one emergency communications receiving window in which only those asset monitoring tags which have identified themselves as meeting a predetermined emergency criterion, are eligible to utilize, whereby said emergency communications receiving window is statistically less crowded than said routine communications receiving window.

In the same field of endeavor of wireless mobile tag communication system, Wizgall et al. teach that the plurality of asset monitoring tags (ER1) (i.e. emergency call transmission devices) and at least one base station (BS) (i.e. base stations) also have defined between them at least one emergency communications receiving window (i.e. a predetermined radio channels in a radio channels) in which only those asset monitoring tags which have identified themselves as meeting a predetermined emergency criterion, are eligible to utilize (column 4 lines 18 to 45; column 5 lines 5 to 39; see Figures 1 and 2), whereby said emergency communications receiving window (a predetermined channel) is statistically less crowded (i.e. less congestion) than said routine communications receiving window (i.e. a radio channels) in order to ensure a emergency message was received by the base station in case of an emergency.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize the need to have an emergency availability of channels in the cellular

telecommunication system of Wizgall et al. in the regular transmission of the uplink and downlink signals using a Poly Aloha Multiple Access to be sure the communication signal is available at all time of MacLellan et al. because communication signal is available at all time in case of an emergency would improve reliable communication between cellular users and base stations that has been shown to be desirable in the radio communication system of MacLellan et al.

Referring to claim 5, MacLellan et al. in view of Wizgall et al. disclose an asset monitoring system according to claim 4, MacLellan et al. disclose wherein the plurality of asset monitoring tags (102-1 to 102-N) comprises a plurality of asset tracking tags (column 1 lines 25 to 46; column 3 lines 21 to 27).

Referring to claim 27, MacLellan et al. in view of Wizgall et al. disclose an asset monitoring system according to claim 4, MacLellan et al. disclose wherein each tag (102) comprises a mobile tag (column 12 line 65 to column 13 line 8; see Figure 1).

Referring to claim 30, MacLellan et al. in view of Wizgall et al. disclose a system according to claim 4, MacLellan et al. disclose wherein communication between base units and tags (102-1 to 102-N) comprises wireless communication (column 1 line 20 to 23; see Figure 1).

Referring to claim 33, MacLellan et al. in view of Wizgall et al. disclose an asset monitoring system as claimed in claim 4, Wizgall et al. disclose wherein at least some of said

plurality of tags (ER1) is operative to transmit an emergency message (i.e. an emergency call message) outside of a receiving window (i.e. radio channels) (column 2 lines 55 to 65; see Figure 1).

Referring to claims 16, 31-32 and 34-38, MacLellan et al. in view of Wizgall et al. disclose an asset monitoring system as claimed in claim 33, the claims 16, 31-32, and 34-38 same in that the claim 33 already addressed above therefore claims 16, 31-32, and 34-38 are also rejected for the same obvious reasons given with respect to claim 33 above.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Wizgall et al. (US# 5,630,209) as applied to claim 4 above, and in further view of Poticny et al. (US# 6,369,710).

Referring to claim 6, MacLellan et al. in view of Wizgall et al. disclose an asset monitoring system according to claim 4, however, MacLellan et al. in view of Wizgall et al. disclose did not explicitly disclose that wherein the plurality of asset monitoring tags comprises a plurality of security monitoring tags each providing security within an area of coverage.

In the same field of endeavor of wireless mobile communication system, Joseph et al. teach that plurality of asset monitoring tags (105) comprises a plurality of security monitoring tags each providing security within an area of coverage (column 1 lines 15 to 49; see Figures 1 and 2) in order to provide safety for the mobile unit users.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize to use mobile tags to provide security with a predetermined area in safety of Poticny et al. in the RFID tags for applications to be interrogated at distances of MacLellan et al. because monitoring a communication signal within a predetermined area of coverage would improve safety to the mobile units that has been shown to be desirable in the RFID tag system of MacLellan et al. in view of Wizgall et al.

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Lo (US# 5,166,929) as applied to claim 9, and in further view of Crisler et al. (US# 5,594,738).

Referring to claims 10-11, MacLellan et al. disclose an asset monitoring system according to claim 9, however, MacLellan et al. did not explicitly disclose wherein said dynamic identifier characterizing the individual tag's current communication status comprises an identification of the slot within which the individual tag most recently transmitted or a digital signature of the most recent message transmitted by the individual tag.

In the same field of endeavor of a digital wireless mobile communication system, Crisler et al. teach a dynamic identifier (i.e. identification code) characterizing the individual tag's current communication status (column 4 lines 3 to 19; see Figure 1) comprises an identification of the slot (i.e. uplink time slot portion) within which the individual tag (102) (i.e. a communication unit) most recently transmitted or a digital signature of the most recent message transmitted by the individual tag (102) (column 4 lines 44 to 65; column 5 lines 7 to 32; column

7 lines 23 to 34) in order to transmit time slot allocation requests in a given available uplink time slot the status of current communication.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize the need to send an uplink time slots includes an identification code of the requesting communication unit of Crisler et al. in the regular transmission of the uplink and downlink signals with the tag identification number of MacLellan et al. because a response signal includes an identification code of the requesting communication unit would improve reliable communication between mobile cellular users and the base station that has been shown to be desirable in the wireless radio communication system between an interrogator and a plurality of tags of MacLellan et al.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Dorenbosch et al. (US# 6,256,493).

Referring to claims 12 and 13, MacLellan et al. disclose a tag interrogation system (column 3 lines 21 to 50; see Figure 1) comprising:

At least one base stations (101) (i.e. an interrogator) (column 3 lines 59 to 63); and

A plurality of tags or seals (102-1 to 102-N) (column 3 lines 62 to 64);

Wherein each base station (101) is operative to broadcast messages (103) (i.e. downlink signals) which are received by the plurality of tags (102-1 to 102-N) and said plurality of tags (102-1 to 102-N) are operative to respond (i.e. uplink signal response) to said broadcast messages (103) (column 3 line 59 to column 4 line 7; see Figure 1).

However, MacLellan et al. did not explicitly disclose each tags having a unique tag identification code, said unique tag identification code including a common portion which is common to a plurality of tags of a predetermined user and a tag specific portion which is unique to each individual tag.

In the same field of endeavor of a wireless mobile communication system, Dorenbosch et al. teach each of tags (122) (i.e. subscriber unit) having a unique tag identification code (i.e. a unique subscriber unit identification or receiver ID), said unique tag identification code including a common portion (i.e. group addresses) which is common to a plurality of tags (122) of a predetermined user and a tag specific portion (i.e. individual) which is unique to each individual tag (102) (column 3 lines 4 to 29; column 4 line 50 to column 5 line 8; see Figures 1 and 2) in order to send messages from the base stations to subscriber units individually or in groups.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize the subscriber units has an unique identification that has both individual and group identification of Dorenbosch et al. in the tag identification number of plurality of tags of MacLellan et al. because having a group and individual tag identification number of the plurality of tags would send the messages between identification tags and the base station in many different ways that has been shown to be desirable in the wireless radio communication system between an Interrogator and a plurality of tags of MacLellan et al.

Claims 14, 15 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Carroll et al. (US# 5,396,227).

Referring to claims 14, 15 and 19-21, MacLellan et al. disclose a tag interrogation system (column 3 lines 21 to 50; see Figure 1) comprising:

At least one base stations (101) (i.e. an interrogator) (column 3 lines 59 to 63); and

A plurality of tags or seals (102-1 to 102-N) (column 3 lines 62 to 64);

Wherein each base station (101) is operative to broadcast messages (103) (i.e. downlink signals) which are received by the plurality of tags (102-1 to 102-N) and are operative to actuate said tags (102-1 to 102-N) (column 3 line 59 to column 4 line 7; see Figure 1).

However, MacLellan et al. did not explicitly disclose tags are operative for sensing tampering thereof once actuated, said tags being selectably actuable in response to wireless actuation messages.

In the same field of endeavor of a wireless mobile communication system, Carroll et al. teach tags (i.e. electronic tags) are operative for sensing tampering thereof once actuated, said tags (14) being selectably actuable in response to wireless actuation messages (column 6 lines 59 to column 7 line 6; column 19 lines 7 to 45; see Figures 1 and 6) in order to avoid removal of the tags from the users.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize to have sensing circuits to detect tampering with within tags of Carroll et al. in plurality of tags of MacLellan et al. because having a sensing circuits to detect tampering of the plurality of tags would protect identification tags from damage and avoid removal from users that has been shown to be desirable in the wireless radio communication system between an Interrogator and a plurality of tags of MacLellan et al.

Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Carroll et al. (US# 5,396,227) as applied to claim 19 above, and in further view of Cofino et al. (US# 6,288,629).

Referring to claims 22-23, MacLellan et al. in view of Carroll et al. disclose a system according to claim 19, MacLellan et al. disclose wherein each of said plurality of tags (102-1 to 102-N) comprises a memory (i.e. local memory) (column 6 lines 53 to 65; column 9 lines 41 to 45) and wherein each base station (101) is operative to broadcast at least two types of actuation messages (i.e. commands).

However, MacLellan et al. in view of Carroll et al. did not explicitly disclose wherein each base station is operative to broadcast at least two types of actuation messages, a first actuation message which reset said memory and a second actuation message which does not reset said memory and wherein each base station is operative to broadcast a memory download messages which causes contents of said memory to be downloaded to said base station.

In the same field of endeavor of a wireless mobile tag communication system, Cofino et al. teach each base station (10) is operative to broadcast at least two types of actuation messages (i.e. commands), a first actuation message (command) which reset said memory (i.e. volatile memory) and a second actuation message (command) which does not reset said memory and wherein each base station is operative to broadcast a memory download messages which causes contents of said memory to be downloaded to said base station (column 6 line 63 to column 7 line 29; column 8 lines 5 to 30; see Figures 3-8) in order to reliably write or clear a non-volatile tag memory.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize to have a base station to send commands to write or reset the non volatile memory of RF tags of Cofino et al. in the memory of the tags of MacLellan et al. because having a base station sends the commands to the tags to reset or clear the memory of tags would allow the base station and plurality of tags to process data at a very efficient and reliably way that has been shown to be desirable in the wireless radio communication system between an Interrogator and a plurality of tags of MacLellan et al.

Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Carroll et al. (US# 5,396,227) as applied to claim 19 above, and in further view of Froschermeier (US# 5,525,992).

Referring to claims 24 and 25, MacLellan et al. in view of Carroll et al. disclose a system according to claim 19, however, MacLellan et al. in view of Carroll et al. did not explicitly disclose wherein communication between said at least one base station and said plurality of tags is encrypted and an authenticator for authenticating communication between said at least one base station and said plurality of tags.

In the same field of endeavor of a wireless mobile tag communication system, Froschermeier teaches communication between said at least one base station (10) and said plurality of tags (14) (i.e. transponders) is encrypted (column 19 line 66 to column 20 line 26; see Figure 13) and an authenticator (104) (i.e. main controller) for authenticating communication

between said at least one base station (10) and said plurality of tags (14) (column 16 lines 56 to 67; see Figure 11) in order to provide a secure communication.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize to have a base station to send an encrypted command signal to RF tags and an authenticator for validating ID code of Froschermeier in the command signals between an interrogator and plurality of the tags of MacLellan et al. because having a base station sends encrypted command signal to the tags and a valid ID code would provide a secure and reliably communication between an interrogator and plurality of tags that has been shown to be desirable in the wireless radio communication system of MacLellan et al.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,940,006) in view of Richards et al. (US# 6,300,903).

Referring to claim 17, MacLellan et al. disclose a tag interrogation system (column 3 lines 21 to 50; see Figure 1) comprising:

At least one base stations (101) (i.e. an interrogator) (column 3 lines 59 to 63); and

A plurality of tags or seals (102-1 to 102-N) (column 3 lines 62 to 64);

Wherein each base station (101) is operative to broadcast messages (103) (i.e. downlink signals) which are received by the plurality of tags (102-1 to 102-N) (column 3 line 59 to column 4 line 7; see Figure 1).

However, MacLellan et al. did not explicitly disclose messages including tracking messages at transmission power levels which monotonically decrease over time and said

plurality of tags each respond to the base station indicating which tracking message was received, thereby indicating the level of transmission power which each tag requires in order to receive the message and thus indicating its distance from a given base station.

In the same field of endeavor of a wireless mobile communication system, Richards et al. teach messages including tracking messages (i.e. signal) at transmission power levels which monotonically decrease over time (column 12 line 46 to column 13 line 24; see Figures 5 and 9) and said plurality of tags (1012 and 1010) (i.e. mobile radios) each respond to the base station (1000) indicating which tracking message was received (column 13 lines 26 to column 14 line 45; see Figure 7), thereby indicating the level of transmission power which each tag requires in order to receive the message and thus indicating its distance from a given base station (column 11 lines 39 to column 12 line 43; column 22 lines 1 to 26; see Figure 17) in order to transmit efficient power level to the tags and increase the efficiency of the communication system.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize to utilizing impulse radio to determine position location of mobile transceiver of Richards et al. in the communication system between an interrogator and plurality of tags of MacLellan et al. because sending the impulse radio signal to the mobile receiver would allow the base station to determine the distance of the mobile receiver accurate when receiving the response signal that has been shown to be desirable in the wireless radio communication system between an Interrogator and a plurality of tags of MacLellan et al.

Allowable Subject Matter

Claims 39-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claims 39-49, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations wherein communication between said at least one base station and said plurality of tags employs synchronization signals based on at least one of the following bits strings:

0, 0, 0, 1, 1, 0, 0, 0

1, 0, 0, 1, 1, 0, 0, 0

0, 1, 0, 1, 1, 0, 0, 0

1, 1, 0, 1, 1, 0, 0, 0

0, 0, 0, 1, 1, 1, 1, 0

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Solondz (US# 5,615,249) discloses a service prioritization in a cellular telephone system.

Callicotte et al. (US# 5,910,944) disclose a radio telephone and method for operating a radiotelephone in slotted paging mode.

Glihousen et al. (US# 6,421,540) disclose a method and apparatus for maximizing standby time using a quick paging channel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 703-305-3867. The examiner can normally be reached on Mon-Fri, 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Nam Nguyen
December 22, 2003

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